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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,572

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David G. Bird

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11/13/2006

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EXAMINER

KIANERSI, MITRA

ART UNIT

PAPER NUMBER

2145

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/731,572	BIRD, DAVID G.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mitra Kianersi	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 12082003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 34-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12082003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12082003</u> . | 6) <input type="checkbox"/> Other: _____  |

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney, or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 34-62 of the present application are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6, 728,268. Although the conflicting claims are not identical, they are not patentably distinct from each other because the independent claims 34, 40, 48, 61-62

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of the present application are not patentably distinct from claim 1 of the U.S. Patent No. 6, 728,268.

Examiner interpretation: Claim 34 of the present invention discloses a method, comprising: communicating information between Internet protocol (IP) hosts within a vehicle equipped with a controller area network (CAN) bus and vehicle modules within the vehicle by encapsulating an IP message in a CAN protocol message to create a CAN/IP message, wherein the CAN/IP message includes an IP destination address, and claim 1 of the U.S. Patent No. 06,728,268 discloses a method of implementing Internet Protocol (IP) hosts on an application specific bus without disrupting the application specific bus comprising: determining an application specific bus address of a remote device, said remote device having an IP address in addition to the application specific bus address; formatting a message conforming to the application specific bus, said message containing an IP datagram and message identifiers; transmitting the message on the application specific bus; receiving the message at the remote device based upon the application specific bus address; authenticating the message as an IP message based upon the message identifiers; and extracting the IP datagram from the message and processing the IP datagram by a conventional IP network processing protocol. In order to standardize communications between the various components of the vehicles, the Controller Area Network (CAN) was defined as a serial communications bus. CAN uses a shared broadcast bus that runs at speeds up to one megabit per second. The CAN protocol sends message frames of variable lengths, containing from zero to eight data bytes, among various devices within the vehicle wherein each frame has a unique identifier which is similar to the controller area network (CAN) bus of the present invention. Claim 1, lines 2-5 discloses encapsulating an IP message in a CAN protocol message to create a CAN/IP message, wherein the CAN/IP message includes an IP destination address, which is similar to CAN/IP 205 may have four component protocols:

Encapsulation Protocol (EP), Authentication Protocol (AP), Address Resolution

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Protocol (ARP), and Congestion Control Protocol (CCP). The EP manages the packing and unpacking of IP datagrams into SAE J1939/21 (222) message frames using the SAE J1939/21 (222) Transport Protocol. The EP messages containing CAN/IP datagrams use the SAE J1939/21 (222) Proprietary A Parameter Group Number (PGN)=61184. This is the SAE J1939/21 (222) destination-specific Protocol Data Unit (PDU) , each IP datagram may have two bytes added to aid in message authentication and to indicate message type. In this embodiment, an IP datagram has an added first byte set at 16, to indicate a CAN/IP message, and an added second byte set at 0, to indicate a standard IP datagram. The added second byte may be set at 2, to indicate a compressed IP datagram. Each IP datagram, with header, is transmitted as a single Transport Protocol message. CAN/IP 205 supports IP datagrams with lengths from 28 to 576 bytes. With the two-byte header, the IP datagrams will be transmitted using from 5 to 83 eight-byte CAN frames. The independent claims 40, 48, 61-62 are teaching the same limitation as independent claims 1, 8, 10, 13, 15-16 and 18-19 of the U.S. Patent No. 6, 728,268. Examiner suggests that the inventor specify the significance of the claimed invention over the U.S. Patent No. 6, 728,268.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 34-62 are rejected under 35 U.S.C. 102(e) as being anticipated by

Botzenhardt et al (US Patent No.5, 901,156)

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1. As per claims 34, 61-62, a method, comprising:  
communicating information between Internet protocol (IP) hosts within a vehicle equipped with a controller area network (CAN) bus and vehicle modules within the vehicle by encapsulating an IP message in a CAN protocol message to create a CAN/IP message, wherein the CAN/IP message includes an IP destination address. (col 4, lines 48-67)
2. As per claims 35 and 49, including using the IP destination address to determine a next-hop IP address. (col 2, lines 13-24)
3. As per claim 36 and 50, including determining a CAN bus address based upon the next- hop IP address. (col 2, lines 13-24)
4. As per claim 37 and 51, wherein if the next hop IP address is a broadcast or multi-cast address, using a CAN global address as the CAN bus address. (col 2, lines 25-35)
5. As per claim 38 and 52, wherein if the next hop IP address is a unicast address, using an address resolution protocol request to determine the CAN bus address. (col 2, lines 25-35)
6. As per claim 39, 43, 48, 56 and 59, wherein using an address resolution protocol request further comprises: transmitting a CAN bus address request message on the CAN bus; and receiving a reply message from one of the IP hosts, including the CAN bus address. (col 4, lines 56-67 and col 5, lines 1-22)
7. As per claim 40, further comprising: transmitting the CAN/IP message to the CAN bus address; and receiving the CAN/IP message at a first one of the IP hosts, which corresponds to the CAN bus address. (col 4, lines 56-67 and col 5, lines 1-22)

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8. As per claims 41, 53-54 and 57, wherein after receiving the CAN/IP message, authenticating the CAN/IP message as being from a second one of the IP hosts. (col 2, lines 24-36)

9. As per claim 42, 46-47, 55 and 58, wherein authenticating the CAN/IP message further comprises:

extracting a CAN source address from the CAN/IP message, wherein the CAN source address is associated with the second one of the IP hosts; and comparing the CAN source address with known CAN addresses stored in an address resolution protocol (ARP) cache, which stores CAN bus addresses and IP addresses.(col 11, lines 43-52)

10. The method of claim 44, wherein after authenticating the CAN/IP message, determining the CAN/IP message type. (col 2, lines 24-36)

11. As per claim 45, wherein if the CAN/IP message type is an ARP request corresponding to the first one of the IP host's IP address, sending an ARP reply verifying the first one of the IP host's address. (col 10, lines 25-35)

12. As per claim 46, wherein if the CAN/IP message type is an ARP reply to a previously sent ARP request, adding the IP address extracted from the ARP reply to the ARP cache. (col 24, lines 39-50)

13. As per claim 47, wherein if the CAN/IP message type is a CAN/IP datagram, extracting and processing the IP message. (col 11, lines 43-52)

14. The system of claim 57, wherein the second IP host is configured to extract and process the IP message if the CAN/IP message type is a CAN/IP datagram. (col 11, lines 43-52)

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mitra Kianersi whose telephone number is (571) 272-3915. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cordone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mitra Kianersi  
Nov/01/2006

  
JASON CARDONE  
SUPERVISORY PATENT EXAMINER